

SPEECH AND HEARING CLINIC
BRainerd STATE HOSPITAL

A COMPARATIVE STUDY
USING VOLUNTEERS IN A LANGUAGE PROGRAM

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ABSTRACT

Seven volunteers received eleven hours of pre-experimental training before participating in a twelve-week language program. Twelve subjects were selected from a target population of trainable mentally retarded children. The subjects were placed in two groups, control and experimental, six subjects per group. The control group remained in its regular programs. The experimental group received the Distar Language Program in conjunction with language encouragement in various environmental settings. A comparison of the two groups indicated significant language gains in the experimental group.

The project presented in this report describes a language development program established by the Speech and Hearing Clinic for those residents in a children-adolescents' unit at Brainerd State Hospital. Staff was not available to service that population; therefore, it was deemed necessary to develop a program in which they could be serviced by supportive personnel.

REVIEW OF THE LITERATURE

Studies indicate the institutionalized mentally retarded are handicapped in language skills. Schlanger (1954) compared groups of institutionalized and non-institutionalized subjects and found significant differences favoring the non-institutionalized subjects in mean sentence length and in words per minute. He attributed this lag with institutionalized people to the lack of an adequate speech model, accentuated by conversing only with peers. Spradlin (1966) claims that the institutions have a tendency to eliminate all forms of communication and disregard correcting grammatical errors or reinforcing proper language. Lyle (1959) and Lyle (1960) reported from results of research studies that institutionalization does not encourage the development of verbal language, and if there is no opportunity to use language, the subjects will not develop it. Hartley and Lehrke (1970) utilized a camp setting in a project at Brainerd State Hospital which emphasized a language program. It was found that language was more spontaneous and more easily stimulated in the non-institutional setting.

In Research on the Linguistic Problems of the Mentally Retarded, by James J. McCarthy, the author cites two studies on language programs: 1) Blessing designed a three-month program to improve the vocal encoding of retarded children. He found a "tendency toward improvement" of the experimental group in vocal encoding as evaluated by the Illinois Test of Psycholinguistic Abilities. A "clear superiority" of this group, over the control group was noted in mean sentence length. 2) Blue designed an eleven-week language development program for trainable mentally retarded with ages ranging from 8 years, 4 months to 17 years, 9 months. The mean language age increase derived from the Illinois Test of Psycholinguistic Abilities was 5.67 months for the experimental group, and 3.67 months for the control group. This difference was not significant.

METHOD

Subjects:

Residents of Brainerd State Hospital, Brainerd, Minnesota, served as the target population. From this population a sample of twelve subjects was drawn using the following criteria:

1. Persons who were Trainable Mentally Retarded. Trainable: those whose intelligence quotients, as determined by a resident psychologist, ranged between 50 and 20.
2. Persons who were enrolled in education and/or recreational programs.
3. Persons who had no less than five nouns in their vocabulary.
4. Persons who were below 21 years of age.
5. Persons who were not diagnosed as legally blind by a medical physician.

Procedures:

Twelve subjects who fulfilled the above criteria were chosen for the project. All of the students were enrolled in recreational activities; however, eight of these people were scheduled in a child development program. To eliminate scheduling conflicts, six subjects not scheduled in the morning child development classes were placed in the experimental group.

The control subjects participated in their regularly scheduled educational and recreational activities, except that the control group did not receive the language program presented by the volunteers.

The experimental group received an additional treatment program emphasizing the Distar Language Program, group singing activities, field trips, and meals outside of their normal setting, in conjunction with language encouragement in a camp setting.

The treatment program was administered by seven female volunteers with an age range from 21 to 76 years. The volunteers were solicited by the Volunteer Services Coordinator and were referred to the Speech and Hearing Clinic for acceptance into the program. The only criterion for volunteer selection by the Speech and Hearing Clinic was their commitment to an eleven-week treatment program, and a two-week training program. The twelve-hour training program incorporated observations of the Distar Language Program from video recordings, lectures on child development, and observations of the subjects' environment. The volunteers were also introduced to the Camp Confidence setting, a camp for retarded and handicapped persons.

Two groups of three volunteers administered the program to three pair of subjects. The subjects were matched in terms of pretest language age scores. After the first week, the volunteers were assigned to a different group, as the initial grouping was unsatisfactory. The subjects were then arranged according to their language abilities in groups of one, two, and three subjects per group. The volunteers were divided so three would be present two days per week, and the other three would be present three days per week. One volunteer acted as a substitute. The program was presented five times per week, with two hour sessions the first two weeks, and three and one-half hour sessions thereafter. Each subject was scheduled for eleven weeks.

DISCUSSION OF THE PROGRAM

All activities were structured to provide the students with language skills and give them opportunities for language expression. The Distar Language Program was presented without modification. Items presented during the class activities were incorporated into similar lessons outside of the class setting. For example, a discussion about food was given prior to breakfast.

Group singing was an integral part of the program. Sesame Street records and tunes from old songs were used. Songs were sung on trips to camp, if discussion was not in process.

The subjects were brought to different places to encourage language. Trips were taken to a wood shop, fire station, garage, radio station, iron mines, Scorpion snowmobile factory, lakes, city buildings, and various home settings. On four separate occasions they had breakfast at the homes of volunteers.

The volunteers met on seven Fridays for a meeting and noon luncheon. The time was utilized for planning and improving the program. Volunteers provided all the therapy. When a volunteer replacement was not available, the student was released from the session. Two clinicians worked with the volunteers daily and observed, but they did not provide language therapy with the subjects.

EVALUATION

Specific language and verbal measures were used for pre-testing, and post-testing. These included the Northwestern Syntax Screening Test, Illinois Test of Psycholinguistic Abilities, Peabody Picture Vocabulary Test, Basic Concept Inventory, and a 50-word Utterance Language Sample. The pre-tests and post-tests were administered in the same order, in a sound treated room. The pre-test was administered within four days prior to the program and the post-testing was completed within four days following the program. The volunteers were not allowed to observe the pre-testing. One subject was not tested in the same setting, as she left for a home visit two days prior to post-testing.

To eliminate examiner's biases, a Speech Clinician not involved in the study acted as a control evaluator and made all final decisions concerned with evaluating the subjects' responses during the pre- and post-tests.

RESULTS

The analysis of data between the experimental group and the control group indicated significant progress was shown by the subjects in the experimental group. Group mean scores and t-test results are shown in Table 1. The experimental group displayed significant gains in all tests, excluding the Peabody Picture Vocabulary Test. The control group displayed no significant gains.

One subject from the control group was receiving speech therapy prior to the project and continued with his therapy program during the project. His post-test scores on the receptive test of the Northwestern Syntax Screening Test was eleven points higher than his pre-test scores, thereby increasing the groups' mean score.

TABLE I

T-Test Results and Mean Scores on the Illinois Test of Psycholinguistic Abilities, Vocal Encoding and Motor Encoding; The Basic Concept Inventory; The Northwestern Syntax Screening Test; The Peabody Picture Vocabulary Test, Form A; and Fifty Oral Responses, Number of Different Words, Number of One Word Responses, and the Average Number of Words Per Utterance

		ITPA	ITPA	BCI	NSST	NSST	PPVT	FIFTY ORAL RESPONSES		
		Motor Encoding	Vocal Encoding		Receptive	Expressive		No. Diff. Words	1 Word Responses	Average Words Per Utt.
EXPERIMENTAL GROUP	Pre-Test	6.33	7.66	-82.50	14	4.66	38.66	58.60	15.83	2.72
	Post-Test	11.80	11.80	-65.16	17	11.66	43.33	92.50	5.00	4.68
	Difference	+5.47	+4.14	+17.44	+3	+7.00	+4.67	+33.90	+10.83	+1.96
EXPERIMENTAL GROUP T-TEST		Signif. at: .05	Signif. at: .01	Signif. at: .05	Signif. at: .01	Signif. at: .05	Not Signif.	Signif. at: .01	Signif. at: .05	Signif. at: .05
CONTROL GROUP	Pre-Test	6.00	8.50	-74.27	14.5	4.83	48.80	76.60	15.00	3.09
	Post-Test	5.83	8.16	-65.66	18.	5.83	50.80	71.10	18.66	2.68
	Difference	-.17	-.34	+ 8.61	+3.5	+1.00	+2.00	-5.50	-3.66	-.41
CONTROL GROUP T-TEST		Not Signif.	Not Signif.	Not Signif.	Not Signif.	Not Signif.	Not Signif.	Not Signif.	Not Signif.	Not Signif.

OBSERVATIONS

There are some observations derived from this project which could be beneficial to future programming of volunteers in a language program.

1. The volunteers were able to assist the subjects in learning language skills using a structured program. The volunteers were found to be a reliable source of supportive personnel. Stressing the commitment to a specific length of time was extremely important in that it assured the volunteers' attendance.
2. The mentally retarded subjects were able to adjust to having the program presented by two or three different volunteers, thus allowing a more concentrated program for each subject.

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